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ABSTRACT

Perceptions of relational development were examined in this study. One hundred and five subjects designated and evaluated three relationships each--those with an acquaintance, a friend, and an intimate friend--producing a total of 247 existing relationships for study. The subjects' evaluations were assessed according to two main variables: perceived closeness and friendship labeling. Results showed that the breadth and depth of communication, the perceived understanding, and the frequency of verbal metacommunication (talk about the relationship) increased as perceived closeness increased. In terms of the friendship-labeling variable, it was found that higher-level friendship labeling was associated with increased depth of communication, perceived understanding, and frequency of metacommunication. (The limitations and implications of this study are summarized, directions for future inquiry are suggested, and 16 tables of findings are included.) (CC)

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COMMUNICATION CORRELATES OF PERCEIVED FRIENDSHIP DEVELOPMENT

by

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COMMUNICATION CORRELATES OF PERCEIVED FRIENDSHIP DEVELOPMENT

It would be difficult to underestimate the importance placed on interpersonal relationships. One need only survey the vast outpouring of popular books, manuals, seminars, workshops and therapies devoted to developing or improving relationships to become convinced of this fact. The topic has spawned a multimillion dollar industry. Even within our own profession the topic of relational development has become a major area of inquiry (Miller, 1976). It is not clear if this intense lay and professional concern reflects some deficiency in contemporary culture. What is significant is that we have become increasingly sensitive to perceptions about the state of our relationships with others.

Perceptions of relational development are of scholarly interest for at least two reasons. First, they often reflect or summarize actual behavioral patterns associated with development. They are markers or symptoms. Second, and perhaps most significant, participants' perceptions of relational development may energize or direct later behaviors. Thus, perceptions of relational development constitute important objects of inquiry in their own right. The present study sought to explore several communication and communication-related correlates of perceived friendship development.

Perceptions of Friendship Development

Everyday language contains or reflects two especially important perceptions of friendship development: 1) "closeness;" and 2) social labels or relational designations. While these are obviously not the only relevant evaluations found in everyday conversation, they are among the most frequently used.

Persons often associate relational development or deterioration with "closeness." Thus, persons may say "We are closer now than ever" or "We're not that close anymore--we just drifted apart." The perceptual analogy between distance and the state of a relationship is also reflected in everyday phrases like "We're really tight." Deteriorating marriages often go through a stage of "separation" before participants finally "split" to "go their own ways." In constrast, the concept of "oneness" is sometimes used to describe happy or ideal relationships. In short, much of our everyday language evaluation and perception is structured in terms of closeness or distance. The analogy also spills over into scholarly discussions. Karen Horney (1942, 1946), for example, described basic motivational dispositions towards others in terms of "moving towards" or "moving away."

Another powerful perceptual and linguistic categorization system is embodied in the various social labels or designations we apply to friendship (e.g., acquaintance, friend, close friend). Each label carries a somewhat different perception of relational development (cf., Munley, 1976). Little attention has been devoted to the developmental or behavioral antecedents or consequences of friendship labeling. In a more general vein, however, attribution theorists (e.g., Kanouse, 1972) have emphasized the impact of labeling on explanations for behavior. Psychotherapists like Satir (1967) have also noted the impact of labeling on behavior toward others. Labeling, then, not only summarizes behavior but may also have an independent impact on responses to others.

Friendship development can thus be examined in terms of changes in perceived closeness or social labels. An understanding of the association of

communication variables or communication-related variables to these perceptual processes is of central concern to the communication researcher.

Correlates of Perceived Friendship Development

Relational development has been described with a wide and often diffuse set of terms. Few concrete or articulate attempts at theory construction exist. Altman and Taylor's (1973) social penetration theory and Berger and Calabrese's (1975) uncertainty reduction theory provide notable exceptions. Although each emphasizes somewhat different aspects of the relational change process, they are closely related and provide a concise set of variables for research. This section develops several hypotheses concerning the relationship between the central communication variables in these theories and perceived friendship development. These variables are: 1) breadth of communication; 2) depth of communication; and 3) uncertainty. Three aspects of the later variable are examined: a) general uncertainty or predictability; b) perceived understanding; and c) frequency of metacommunication.

Breadth In its most general sense breadth refers to the variety of social exchange. In communication terms breadth refers to the variety or diversity of conversational topics (Altman & Taylor, 1973). Studies employing a social penetration perspective have consistently found a positive association between relational development and breadth of communication (e.g., Altman & Haythorn, 1965; Frankfurt, 1965; Colson, 1968; Taylor, 1968). Increases in breadth of communication are hypothesized to be positively associated with perceived friendship development. As breadth increases, participants should describe their relationship as "closer" and should use labels associated with higher levels of development.

Depth Broadly speaking, depth refers to the subjective values of the behaviors exchanged in interaction. Depth of communication is most often equated with the intimacy of topics discussed (Altman & Taylor, 1973). Studies based on social penetration theory have also consistently reported a positive association between depth and relational development (e.g., Altman & Haythorn, 1965; Frankfurt, 1965; Colson, 1968; Taylor, 1968).

Several other perspectives also suggest or support such a hypothesis. Simmel's work (1950) distinguished casual relationships from highly developed relationships in terms of intimacy. Thibaut and Kelley (1959) note the "restraint" of initial exchanges. Burchinal (1964) has characterized differences between dating, engagement and marriage in terms of shifts toward more extensive and intimate obligations. McCall and Simmons (1966) described the development of an interpersonal relationship in terms of greater involvement of the participants with each other as "personal" entities.

Compatible views can be found in many clinical and humanistic perspectives. The development of "healthy" relationships has often been associated with increased depth of communication (e.g., Sullivan, 1953; Fromm, 1956; Jourard, 1968; Mayeroff, 1971; Derlega & Chaikin, 1975). Increasing depth or intimacy has been suggested as an essential factor in the development of the therapist-client relationship (Rogers, 1958). Polansky and his associates (Polansky & Weiss, 1959; Polansky, Weiss & Blum, 1961; Polansky, 1965) have emphasized the role of "verbal accessibility" to the patient's underlying personality in the therapeutic process.

Communication researchers (e.g., Miller & Steinberg, 1975) have spoken of the development of an interpersonal communication relationship in terms of a greater use of information about the participants as unique individuals.

Such "psychological level" data can be viewed as having greater depth than information based on cultural or group characteristics of the participants. As initial interactions progress, communication is characterized by a greater reliance on unique or personal characteristics of the communicators (Berger, Gardner, Clatterbuck & Schulman, 1976).

Several discussions of actual and perceived friendship development can also be related to the perspective taken here. A number of observers have pointed to intimacy and disclosure as factors distinguishing friendship from non-friendship relations (e.g., Williams, 1959; Suttles, 1970; Weinberg, 1970). These factors have also been hypothesized to discriminate between various labels for friendship. Naegele (1958), for example, interviewed high school students and reported that several labels or designations ranging from "acquaintance" to "best friend" were perceived by his respondents. According to Naegele, these levels were most distinguishable in terms of the amount and depth of self-disclosure. In differentiating simple "friendly" relations from more developed levels of friendship, Kurth (1970) reached a similar conclusion.

In summary there is a large measure of consensus across a wide variety of perspectives. Common to these perspective is the notion that relational development can be described in terms of increasing depth or intimacy. In this context it is hypothesized that increasing depth should be associated with greater perceived closeness and the use of higher "level" friendship labels or designations.

Uncertainty The reduction of uncertainty regarding the behaviors of self and others has been suggested as a central process in relational development (e.g., Berger, 1975; Berger & Calabrese, 1975). Intimacy as well

other characteristics of relationships develop as a function of uncertainty reduction. The ability to predict or project future outcomes also plays a central role in social penetration theory (Altman & Taylor, 1973). Uncertainty can be reduced in several ways (cf., Berger, Gardner, Parks, Schulman & Miller, 1976). The acquisition of information which allows participants to predict the behaviors or characteristics of others plays a general role in the uncertainty reduction process. A more powerful type of information is data which allows one to understand or explain others' actions. An explanatory level of information allows participants to derive coherent sets of predictions about as yet unobserved contexts or situations. Both types of uncertainty reduction should be associated with perceived friendship development. As participants become better able to predict each other's actions and characteristics, the level of perceived development should increase. As participants feel that they understand each other more fully, the level of perceived friendship development should also increase.

While general predictive and explanatory information acquisition promotes uncertainty reduction, one specific type of communication would seem to play an especially powerful role. This is metacommunication--communication about the state or nature of the relationship. Verbal metacommunication can serve several uncertainty reduction functions: 1)focusing conscious attention on the process of interaction; 2) assisting participants in deriving explanations for what is going on; 3) providing an opportunity to check vague feelings about what is transpiring; 4) allowing for a check with others to determine if perceptions about the interaction are shared; and 5) providing direct feedback on how participants view one another (Rossiter, 1974). Verbal metacommunication, then, provides a substantial

amount of data for the reduction of uncertainty in relational development.

Hypotheses The preceding sections identify two types of perceived friendship development and suggest that they are associated with several communication and communication-related variables. These hypotheses are formalized below:

H_1: The greater the breadth of communication, the greater the perceived friendship development.

H_2: The greater the depth of communication, the greater the perceived friendship development.

H_3: The greater the predictive uncertainty, the less perceived friendship development.

H_4: The greater the perceived understanding, the greater the perceived friendship development.

H_5: The greater the frequency of verbal metacommunication, the greater the perceived friendship development.

The earlier discussion suggested that perceptions of relational development may serve a dual function--summarizing current development and directing or energizing future development. This perspective would ultimately view these hypotheses as causal and nonrecursive. Given the paucity of previous research on this issue, however, the present study sought the somewhat more modest and basic test of association. Tests of this nature represent the first stage in the articulation of fully specified propositions.

METHOD

Pretest

It was suggested that the various social labels or designations for friendship implied differing levels of relational development. An initial

task was to array these various labels in terms of level of development and to select some subset for further inquiry.

Subjects Questionnaires were given to 86 undergraduates enrolled in lower division communication courses at a large midwestern university. Subjects volunteered for the project and received extra credit for thier participation. The mean age of the same was 18.79 years (SD = 1.26). Fifty-eight (67.4%) were female, while 28 (32.6%) were male. Almost all (96.5%) were unmarried.

Procedures Subjects were instructed to evaluate 10 commonly used social designations or labels for friendship. Judgments were made by placing a slash along a 100 mm line bounded by the phrases "Not Close at All" and "Extremely Close." Higher scores indicated greater closeness. Instructions emphasized that subjects were to interpret the continuums in terms of greater or lesser relational development.

Results Means and standard deviations for each of the 10 labels are reported in Table 1. The various labels or designations appeared to span almost the entire range of the developmental continuum.

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Discussion The major utility of these findings was in terms of design considerations for the main study. In order to conduct the main study it was decided that a limited number of relationships would be tapped. Results of the pretest were used to identify a set of labels which contained substantial within and between label variance. All appeared to possess ample within label variance. Distinctions as to the placement of the

labels along the developmental continuum allowed the investigator to somewhat arbitrarily select the following labels: 1) acquaintance; 2) friend; and 3) intimate friend. This decision was based on two considerations. First, the acquaintance and intimate friend labels represented extremes on the continuum and were most likely to maximize variance in the measure. Second, the three terms were approximately equally spaced along the developmental continuum and would thus simplify any comparisons based on friendship level.

Main Study

Subjects A final sample of 63 females and 42 males completed a three-wave survey. This represented a 92.9% completion rate when compared to the 113 persons who began the study. Participants were enrolled in lower division communication courses at a large midwestern university. Participation was voluntary and completion of the study was used as extra credit. Subjects ranged in age from 18 to 30 (M = 19.29, SD = 1.60). Virtually all had never been married (97.1%).

Procedures Each participant was instructed to sel- erson with whom they enjoyed each of the three levels of friendship (i.e., acquaintance, friend, intimate friend). As a result the 105 final participants generated information about a total of 315 relationships. Each subject then evaluated each of the three relationships in terms of the other research variables.

A three-wave survey design was employed in order to obtain test-retest reliability estimates and to reduce demands on the subject. Questionnaires were distributed approximately seven to 10 days apart.

In an effort to identify and remove deteriorating friendships, subjects were asked the following question about each of their relationships: "Has

this person ever been a better friend than he or she currently is?" Subjects responded affirmatively in 68 of the 315 relationships. These were eliminated from the developmental analyses leaving a total of 247 relationships for examination.

In an effort to more fully assess the reliability of measurement and to extend the possibilities for secondary analysis and explanation, subjects were asked to provide the full name and address for one of the persons they had designated. Slightly less than 50% (n = 49) of the subjects allowed the investigator to directly contact one of their friends by mail. These reciprocated contacts were sent a questionnaire. Forty-three (87.8%) questionnaires were returned--although one of these was later removed because the original participant had failed to complete the study. Thus, a smaller sample of 42 reciprocated contacts was obtained.

Instrumentation The two dependent variables were level of friendship designation and perceived closeness. The former was fixed by the design. The latter was measured by asking subjects to indicate how "close" the relationship was along a nine-point scale bounded by the phrases "Not Close at All" and "Extremely Close." This item appeared in the first, second and mail questionnaires.

Breadth and depth of communication were operationalized by means of a set of intimacy-scaled statements selected from a larger set developed by Taylor and Altman (1966a,1966b). This larger set consisted of 671 items pertaining to 13 different topics which people might discuss as they formed interpersonal relationships. Each item has previously been scaled along an intimacy continuum ranging from 1.0 to 11.0. The subset used here was selected by the following criteria: 1) items were included

only if Taylor and Altman reported that they could be scaled for intimacy with "high" or "moderate" reliability; 2) items were selected so as to include all of the general topics except "own marriage and family;" and 3) items were selected so as to include four items at each of ten levels of intimacy. That is, items meeting the first two criteria were randomly selected so that there were four items between 1.0 and 2.0 on the Taylor and Altman scale, four items between 2.0 and 3.0, four items between 3.0 and 4.0, and so on. The final set of 40 items ranged from 1.23 to 10.69 in terms of Taylor and Altman's intimacy scalings. In first, third and mail questionnaires subjects were asked to indicate which of these items or statements they had discussed with the other party.

A general measure of communication breadth was obtained by simply summing the number of items checked by the participant. The greater the number of items checked, the greater the breadth of communication. Two measures of depth of communication were derived. Maximum depth was simply the intimacy value for the highest item checked. Average depth was operationalized as the mean value (using Taylor and Altman's scale values) for all of the checked items on a given administration.

Predictive uncertainty was operationalized by means of a 19 item scale developed by Clatterbuck (1976). Items assessed the participant's confidence in his or her ability to predict various actions and characteristics of the other member of the relationship. Previous use of these items by Clatterbuck and the present investigator had indicated that they were internally consistent and strongly unidimensional. In the second and mail questionnaires, subjects were instructed to indicate their level of

predictive confidence along a nine-point scale for each item. Item scores were summed. The higher the score, the greater the ability of the subject to predict various aspects of the other.

Explanatory uncertainty was operationalized in terms of perceived understanding. A global measure was obtained by asking subjects the following question in the first, third and mail questionnaires: "How well do you think this person understands what kind of a person you are?" Responses were given on a nine-point scale bounded by the phrases "Not Well at All" and "Extremely Well."

Frequency of metacommunication was given a restricted operationalization in this study. Given the great variety and subtlety of nonverbal metacommunicative cues and the paucity of previous research on nonverbal metacommunication, it was decided to focus on verbal metacommunication. In the first, second and mail questionnaires subjects were presented with the following item: "How frequently do the two of you actually talk about the state or nature of your relationship?" Responses were given on a nine-point scale bounded by the phrases "Almost Never" and "Quite Frequently."

Operationalizations for all of the variables except predictive uncertainty appeared during two different waves as well as in the mail questionnaire for the reciprocated contacts. The final value for each was simply the mean of the two estimates. Since predictive uncertainty was a multi-item measure, an internal consistency test of reliability could be applied--removing the need to repeat the scale across waves of the study.

RESULTS

Measurement Reliability

Subject Reliability Test-retest and internal consistency reliability estimates for measured variables are summarized in Table 2. Since it made no difference in terms of the reliability of measurement, all relationships (both decayed and non-decayed) were utilized (n = 315). With the exception of the average depth measure, estimates for all variables appeared to approach more or less traditionally acceptable levels of magnitude (cf., Nunnally, 1967).

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Subject/Other Reliability Four of the variables (breadth, average and maximum depth, verbal metacommunicative frequency) focus on a dyadic level. That is, each pertains to a joint aspect of the relationship. As a result, we would expect that both participants in a relationship would have very similar scores on each. The small mail sample of 42 reciprocated contacts allowed such comparisons. As Table 3 reveals, however, the pattern of correlations between subject judgments and the judgments of the subject's relational partner is somewhat less than heartening. Although significant, none of the correlations approach an acceptable level of reliability. Even joint and observable aspects of communication are apparently perceived inconsistently by the participants themselves.

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Bivariate Variable Relations

Each hypothesis was examined in terms of perceived closeness and friendship designation. The former analyses were conducted with the 247 non-decay relationships. The zero-order correlation matrix for perceived closeness and the various independent variables is presented in Table 4. Descriptive statistics are reported in Table 5. The latter set of analyses involved One-Way ANOVAs in which level of friendship (acquaintance, friend, intimate friend) was compared with each of the other research variables. A smaller data set was employed for these analyses. Subjects were included only if no decay was reported in any of the three designated relationships. Of the 105 participants, 53 met this criteria. This allowed the computation of One-Way ANOVAs with repeated measures. Descriptive statistics for each of the research variables across the three levels of friendship are reported in Table 6.

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INSERT TABLES 4,5,6 HERE
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Breadth of Communication The first hypothesis suggested a positive association between breadth of communication and perceived friendship development. A strong positive correlation, $r = .72$, $p < .001$, between perceived closeness and breadth of communication was observed. As Table 7 reveals, however, this finding was not replicated in the analysis of breadth across the three friendship levels, $F(2/104) = 1.91$, n.s. Although the greatest breadth was achieved in intimate friendship ($M = 36.66$, $SD = 16.71$), the next greatest breadth was reported in acquaintances ($M = 32.72$, $SD = 15.16$) rather than in friend relations as expected ($M = 31.05$, $SD = 15.76$).

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INSERT TABLE 7 HERE
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Thus, the first hypothesis was supported when perceived closeness was used as an indicator of perceived friendship development, but not supported when friendship labels or designations were used.

Depth of Communication Measures of maximum and average depth of communication were compared to perceived closeness and level of friendship. Both maximum depth, $r = .57$, $p < .001$, and average depth, $r = .66$, $p < .001$, were strongly and positively associated with perceived closeness. The ANOVA examining maximum depth across the three levels of friendship did not produce any significant differences (Table 8), $F(2/104) = 0.54$, n.s. Average depth of communication, however, was found to increase across the three levels of friendship (Table 9), $F(2/104) = 42.64$, $p < .0001$.

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INSERT TABLES 8 & 9 HERE
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Perceived friendship development in terms of both perceived closeness and level of friendship designation increased as a function of the average depth of communication. For maximum depth of communication, however, the second hypothesis was supported only for the perceived closeness measure.

Predictive Uncertainty Both types of analyses supported the hypothesized relationship between predictive uncertainty and perceived friendship development. A large negative correlation between predictive uncertainty and perceived closeness was observed, $r = -.79$, $p < .001$. A significant difference in the level of uncertainty or predictability was observed as Table 10 indicates, $F(2/104) = 74.17$, $p < .0001$. Keeping in mind that higher scores were indicative of greater predictability (i.e., lower uncertainty), the results of this analysis were analogous to those with perceived closeness.

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INSERT TABLE 10 HERE
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Perceived Understanding Explanatory uncertainty reduction was operationalized in terms of perceived understanding. Both analyses lent credibility to the fourth hypothesis suggesting a postive association between perceived friendship development and perceived understanding. Perceived closeness and perceived understanding were found to be positively correlated, $r = .87$, $p < .001$. The ANOVA summarized in Table 11 indicated significant differences in perceived understanding across the three levels of friendship, $F(2/104) = 56.82$, $p < .0001$. An examination of the cells means (Table 6) revealed that perceived understanding increased with the level of friendship designation.

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Frequency of Verbal Metacommunication. The overall frequency of verbal metacommunication across all relationships was found to be rather low-- a mean of 3.61 (SD = 2.44) on a nine-point scale. Despite the rather low levels of metacommunication, the frequency of metacommunication was found to be positively associated with perceived closeness as hypothesized, $r = .59$, $p < .001$. An analoguous result emerged from a test of differences in metacommunication frequency across the three levels of friendship (Table 12), $F(2/104) = 17.63$, $p < .0001$. An increasing, generally linear function relating the frequency of verbal metacommunication with the level of friendship designation was revealed by an examination of cell means (Table 6).

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Perceived Closeness In an effort to explore the relationship between the two measures of perceived friendship development, the level of perceived

closeness was examined across the three levels of friendship. An overall significant difference was observed (Table 13), $F(2/104) = 11.55$, $p < .001$. The pattern of cell means (Table 6) indicated that perceived closeness increased across the three levels of friendship designation. However, an F-ratio this small with such large cell sizes might be more accurately interpreted in terms of statistical power than theoretic import. To test this possibility an Omega-Squared procedure (Hays, 1973) was employed. It was found that the two variables were only minimally associated, $\Omega^2 = .097$. Perceived closeness and level of friendship designation, then, are not similar indicators of perceived relational development.

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Sex Differences

Although no sex differences were hypothesized, three sets of comparisons were made: 1) male vs. female subjects; 2) male vs. female same-sex dyads; and 3) same- vs. opposite-sex dyads.[1] The large number of subjects and the fact that comparison groups were often markedly different in terms of size force these analyses to be viewed in a very tentative and exploratory light.

Male vs. Female Subjects Of the 247 non-decay relationships, 102 were evaluated by male subjects while 145 were evaluated by female subjects. The results of t-tests comparing these two groups in terms of each of the research variables are presented in Table 14.

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Across levels of friendship designations and relationship sex composition, females were found to: 1) achieve greater breadth of communication; 2) achieve greater average depth of communication; and 3) verbally metacommunicate with greater frequency than males. No differences were found for maximum depth, predictive uncertainty, perceived understanding or perceived closeness.

Male vs. Female Same-sex Dyads Most of the relationships (n = 199) were same-sex. Of these, 82 were same-sex male friendships while 117 were same-sex female friendships. As one might expect, comparisons of these two groups closely paralleled those above. Compared to same-sex male friendship dyads, same-sex female dyads were found to exhibit: 1) greater breadth of communication; 2) greater average depth of communication; and greater frequencies of verbal metacommunication. No differences were found with respect to the other research variables (See Table 15).

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Same- vs. Opposite-sex Dyads As noted above, 199 of the 247 non-decay relationships were same-sex. As Table 16 indicates, these same-sex relationships differed in several ways from the 49 opposite-sex relationships. Greater perceived closeness, breadth of communication, maximum and average depth of communication, predictability and perceived understanding were reported in same-sex friendships. No differences were found in the frequency of verbal metacommunication.

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DISCUSSION

Three general limitations of the present study should be noted. First, the restricted nature of the sample limits the generalizability of these findings. The subjects in this study were generally 18-20 years of age and almost all were unmarried. It may be that perceptions of friendship development have different bases for older individuals or persons who are married. Future research might usefully replicate this study among these groups.

Second, the present study was decidedly cross-sectional in design. While cross-sectional research represents a useful and economical first step in the study of relational change processes, less ambiguous findings would be obtained from longitudinal studies.

Third, and perhaps most important, the various independent variables in this study were highly interrelated as the zero-order correlation matrix demonstrates (Table 4). Future researchers should account for this by employing statistical procedures capable of sorting out independent effects for each variable. A related limitation exists with respect to the sex difference findings. Given the distribution of subjects and relationships in this study, it was impossible to systematically examine the various configurations of sexual composition in a simultaneous fashion. While the various comparisons made in this study were illuminating in an exploratory sense, they were necessarily segmented and incomplete.

Inspite of these limitations, the present study was useful in several ways. When perceived closeness was used as an indicator of perceived friendship development, all five of the hypotheses received support. As the

breadth and depth of communication increased, so did perceived closeness. Perceived closeness was also founded to be associated with each of the three uncertainty variables. Greater perceived understanding and frequencies of verbal metacommunication coincided with greater perceived closeness. Decreases in predictive uncertainty were associated with increases in perceived closeness.

The various labels or designations people use to describe or categorize their friendships were also found to covary with the various relational development variables. "Higher level" designations were positively associated with increases in the average depth of communication, perceived understanding and the frequency of verbal metacommunication. Predictive uncertainty was found to decrease as "higher level" designations were used. Interestingly, neither the maximum depth nor the breadth of communication were associated with friendship designation. It may be that these factors are more closely associated with the perception of relational closeness. The differences between perceived closeness and friendship designation with respect to these two variables highlight the fact that perceived closeness and friendship designation are different types of perceptual indicators.

Although the sex difference findings were tentative and highly exploratory, they did suggest the need for further study of sex differences in relational development patterns. Along several dimensions females as individuals and as participants in same-sex friendships reported higher values on the developmental variables. Some observers (e.g., Jourard, 1971; Block, 1973; Brenton, 1974; David & Brannon, 1976) have suggested that males are less expressive or disclosing than females. Disclosure research has yielded mixed findings--some studies showing no difference and others showing greater

female self-disclosure (cf., Cozby, 1973). Berger and Larimer (1974) found that females tended to be more informative about themselves in initial interactions than males. While these studies are informative from the standpoint of self-disclosure research, they tell us little about the relational development process. The results of this study might suggest that females are more facile in forming friendships--at least they score higher on variables positively associated with relational development. Moreover, few studies have systematically examined the effects of differing sexual compositions in friendship. This study indicates marked differences in perceptual and developmental variables as a function of composition. While the findings of the present research are far from conclusive, they do testify to the need for more systematic examinations of sex differences in the process, rate and structure of relational development.

The present study represented the first stage in a research program on perceptions of relational development. In general strong associations were found between the two indicators of perceived relational development and the several developmental variables. Attempts to further specify these associations raise several valuable issues for future research. It will be necessary to more fully explore the hypothesized dual function of perceptions of relational development. Under what conditions does the mental act of labeling a relationship with a particular designation either facilitate or retard the development of the relationship? Do relationships develop more smoothly or rapidly when participants employ similar labelings?

The findings with the small sample of reciprocated contacts indicated that participants often do perceive the friendship in very different ways. The consequences for development deserve further investigation. A related area of inquiry has to do with friendship networks. To the extent that a pair alters their perceptual labeling of their relationship and to the extent that this change is communicated, we might expect other members of the broader friendship network to alter their perceptions of or behaviors toward the pair. This in turn may have consequences (either positive or negative) for the pair's relationship.

Notes

1. Independent t-tests were run on the latter comparisons even though some subjects contributed data to both groups making the means partially correlated. Performing independent t-test on partially correlated data can yield error estimates which are higher than those yielded by a correlated t-test. Thus, the t-values reported here may be smaller than they would have been if the partial correlation could have been taken into account.

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Table 1

Means and Standard Deviations for Friendship Designations[a]

Designations	Mean	Standard Deviation
Acquaintance	17.05	12.78
Casual Acquaintance	17.61	12.56
Casual Friend	31.83	13.98
Just Friends	39.37	14.49
Friend	52.28	14.47
Good Friend	63.59	13.56
Close Friend	78.84	11.53
Very Good Friend	80.49	11.93
Best Friend	86.74	11.21
Intimate Friend	90.52	12.73

[a] $\underline{n}$ = 86 for all statistics.

Table 2

Subject Judgment Reliabilities

Variable	Reliability Estimate
Closeness[a]	.86
Breadth of Communication[a]	.90
Maximum Depth of Communication[a]	.74
Average Depth of Communication[a]	.61
Predictive Uncertainty[b]	.91
Perceived Understanding[a]	.77
Frequency of Verbal Metacommunication[a]	.72

[a]Test-retest correlation. All correlations reached $p < .001$ ($n = 315$).

[b]Internal Consistency Coefficient--Cronbach Alpha (Cronbach, 1951).

Table 3

Correlations of Subject/Other Judgments[a]

Variable	r	p
Breadth of Communication	.65	< .001
Maximum Depth of Communication	.30	< .05
Average Depth of Communication	.38	< .01
Frequency of Verbal Metacommunication	.57	< .001

[a]$n = 42$ for all correlations.

Table 4

Correlation Matrix for Major Variables
for Non-Decay Relationships[a]

Variable	1	2	3	4	5	6
1. Perceived Closeness						
2. Breadth of Communication	.72					
3. Max. Depth of Communication	.57	.71				
4. Ave. Depth of Communication	.66	.92	.81			
5. Predictive Uncertainty	-.79	-.79	-.57	-.70		
6. Perceived Understanding	.87	.70	.55	.65	-.76	
7. Freq. of Verbal Metacomm.	.59	.56	.37	.54	-.53	.55

[a] $\underline{n}$ = 247 for all correlations. All correlations reached $\underline{p} < .001$.

Table 5

Means, Standard Deviations and Ranges for Major Variables for Non-Decay Relationships[a]

Variable	M	SD	Range
Perceived Closeness	6.03	2.12	1.00 - 9.00
Breadth of Communication	22.40	10.32	0.00 - 40.00
Maximum Depth of Communication	9.79	1.36	0.00 - 10.69
Average Depth of Communication	4.27	1.19	0.00 - 6.03
Predictive Uncertainty	112.75	31.05	30.00 - 169.00
Perceived Understanding	6.35	2.13	1.00 - 9.00
Frequency of Verbal Metacomm.	3.61	2.44	1.00 - 9.00

[a] n = 247 for all statistics.

Table 6

Means and Standard Deviations by Friendship Level for Non-Decay Relationships[a]

Variable	Acquaintance	Friend	Intimate Friend
Perceived Closeness	4.15(1.69)	6.47(1.31)	7.76(0.90)
Breadth of Communication	32.72(15.16)	31.05(15.76)	36.66(16.71)
Max. Depth of Communication	6.58(2.06)	6.63(1.89)	6.32(1.57)
Ave. Depth of Communication	3.45(1.18)	4.12(1.06)	5.01(0.84)
Predictive Uncertainty	90.62(23.69)	116.64(24.98)	135.70(16.38)
Perceived Understanding	4.75(1.89)	6.76(1.45)	7.85(1.25)
Freq. of Verbal Metacomm.	2.33(1.69)	3.69(2.39)	4.56(2.59)

[a] n = 53. This represents participants who reported no decay at any of the three friendship levels. Standard Deviations in parentheses.

Table 7

Breadth of Communication by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	15380.40	52	295.78		
Within Subjects	24882.50	106	234.74		
Between Groups	880.63	2	440.31	1.31	n.s.
Residual	24001.87	104	230.79		
Total	40262.90	158	254.83		

Table 8

Maximum Depth of Communication by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	246.26	52	4.74		
Within Subjects	290.10	106	2.74		
Between Groups	3.00	2	1.50	0.54	n.s.
Residual	287.10	104	2.76		
Total	536.36	158	3.39		

Table 9

Average Depth of Communication by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	89.02	52	1.71		
Within Subjects	144.24	106	1.36		
Between Groups	64.99	2	32.49	42.64	<.0001
Residual	79.25	104	0.76		
Total	233.26	158	1.48		

Table 10

Predictive Uncertainty by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	37524.64	52	721.63		
Within Subjects	92318.00	106	870.92		
Between Groups	54270.83	2	27135.42	74.17	<.0001
Residual	38047.17	104	365.84		
Total	129842.64	158	821.79		

Table 11

Perceived Understanding by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	135.23	52	2.60		
Within Subjects	503.67	106	4.75		
Between Groups	262.99	2	131.50	56.82	<.0001
Residual	240.68	104	2.31		
Total	638.90	158	4.04		

Table 12

Frequency of Verbal Metacommunication by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	401.73	52	7.73		
Within Subjects	527.16	106	4.97		
Between Groups	133.48	2	66.74	17.63	<.0001
Residual	393.68	104	3.79		
Total	928.90	158	5.88		

Table 13

Perceived Closeness by Friendship Designation

Source of Variation	SS	df	MS	F	p
Between Subjects	1318.94	52	25.36		
Within Subjects	1877.85	106	17.71		
Between Groups	341.37	2	170.69	11.55	<.0001
Residual	1536.47	104	14.77		
Total	3196.78	158	20.77		

Table 14

Comparisons of Relationships Evaluated by Males and Females[a]

Variable	Group	M	SD	df	t	p
Perceived Closeness	Males	5.99	1.93	245	0.25	n.s.
	Females	6.06	2.33			
Breadth of Communication	Males	20.11	9.10	245	2.97	<.05
	Females	24.01	10.84			
Maximum Depth of Communication	Males	9.64	1.45	245	1.45	n.s.
	Females	9.89	1.29			
Average Depth of Communication	Males	3.94	1.23	245	3.68	<.01
	Females	4.50	1.19			
Predictive Uncertainty	Males	112.25	26.69	241,80	0.21	n.s.[b]
	Females	113.09	33.87			
Perceived Understanding	Males	6.19	1.96	245	0.98	n.s.
	Females	6.47	2.23			
Frequency of Verbal Metacommunication	Males	3.11	2.36	245	2.69	<.05
	Females	3.95	2.45			

[a] n = 102 for male evaluated relationships; n = 145 for female evaluated relationships.

[b] Separate variance estimate--all other tests are pooled variance estimates.

Table 15

Comparisons of Male and Female Same-Sex Relationships[a]

Variable	Group	M	SD	df	t	p
Perceived Closeness	Males	6.23	1.85	197	0.08	n.s.
	Females	6.21	2.25			
Breadth of Communication	Males	21.66	9.02	197	2.37	<.05
	Females	25.07	10.63			
Maximum Depth of Communication	Males	9.76	1.42	128,06	1.70	n.s.[b]
	Females	10.07	0.93			
Average Depth of Communication	Males	4.10	1.10	197	3.25	<.01
	Females	4.62	1.11			
Predictive Uncertainty	Males	115.24	26.44	194,20	0.01	n.s.[b]
	Females	115.22	33.52			
Perceived Understanding	Males	6.46	1.88	197	0.64	n.s.
	Females	6.64	2.55			
Frequency of Verbal Metacommunication	Males	3.21	2.45	197	2.97	<.05
	Females	4.13	2.51			

[a] n = 82 for male same-sex relationships; n = 117 for female same-sex relationships.

[b] Separate variance estimates--all other tests are pooled variance estimates.

Table 16

Comparisons of Same-Sex and Opposite-Sex Relationships[a]

Variable	Groups	M	SD	df	t	p
Perceived Closeness	Opposite	5.23	2.03	245	2.97	<.05
	Same	6.22	2.10			
Breadth of Communication	Opposite	17.11	9.51	245	4.08	<.01
	Same	23.67	10.12			
Maximum Depth of Communication	Opposite	9.15	1.83	56,49	2.85	<.05[b]
	Same	9.94	1.17			
Average Depth of Communication	Opposite	3.65	1.22	245	4.08	<.01
	Same	4.41	1.14			
Predictive Uncertainty	Opposite	102.43	30.55	245	2.59	<.05
	Same	115.23	30.73			
Perceived Understanding	Opposite	5.47	2.00	245	3.28	<.01
	Same	6.57	2.10			
Frequency of Verbal Metacommunication	Opposite	2.99	2.00	245	1.96	n.s.
	Same	3.75	2.52			

[a] n = 48 for opposite-sex relationships; n = 99 for same-sex relationships.

[b] Separate variance estimate--all other tests are pooled variance estimates.